Remarks

In response to the non-final Office Action mailed February 2, 2005, the Applicants respectfully request reconsideration of the rejections and that the case pass to issue in light of the amendments above and the remarks below. By this paper, claims 1, 2, 4, 9, 10--14, and 16 are amended and no other claims are amended, canceled, or added. As such, claims 1-20 are pending.

Claims 1-4, 6-8, 10, 13, and 18-20 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S.P.N. 6,515,456 to Mixon (hereinafter the Mixon patent) in view of U.S.P.N. 5,362,942 to Vanderslice (hereinafter the Vanderslice patent) and claims 5 and 14-17 are rejected under 35 U.S.C. § 103(a) as being unpatentable over the Mixon patent in view of the Vanderslice patent and further in view of U.S.P.N. 6,424,157 to Gollomp (hereinafter the Gollomp patent. The Examiner has indicated that claims 9 and 12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form.

The Applicant's invention relates to heating a battery in a vehicle upon determining a shut-down condition. In particular, the Applicant's invention relates to enabling energy flow from the battery to a heater to heat the battery after determining the shut-down condition. The Applicant respectfully submits that none of the references cited by the Examiner teach enabling energy flow from the battery to a heater in response to determining a vehicle shut-down condition.

Rejection of Claims 1-4, 6-8, 10, 13, and 18-20 Under 35 U.S.C. § 103(a) Over the Mixon and Vanderslice Patents

The Applicant submits there is no motivation, absent improper hindsight derived from Applicants application, for combining the teachings of the Mixon and Vanderslice patents, and that even the improper combination of those patents still fails to disclose the claimed invention.

In more detail, the Mixon patent relates to determining battery state of charge and controlling battery charging as a function thereof. In contrast, the Vanderslice patent relates to determining battery temperature and controlling battery heating as a function thereof. The Applicants respectfully submit that there is no motivation to combine these references.

The Examiner's reliance on the fact that both references generally relate to monitoring battery conditions is insufficient to support combining the references. Neither reference provides any indication for including the teachings of the other. In more detail, the Mixon patent has no concern or recognition of the need to heat batteries as taught by the Vanderslice patent, and the Vanderslice patent as no concern or recognition of the need to charge batteries as a function of battery state of charge as taught by the Mixon patent. As such, neither references provides any incentive for incorporating the teachings of the other.

The Applicant notes MPEP § 2143.01 which states "obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. This portion of the MPEP continues to point out that the mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests that the desirability of the combination.

Not withstanding the proprietary of combining the Mixon and Vanderslice patents, the Applicants respectfully submit that their improper combination still fails to teach the limitations recited in independent claims 1, 10, and 13. In particular, each of these independent claims include limitations generally directed to enabling energy flow from the battery to a heater to heat the battery after determining a vehicle shut-down condition. Because the improper combination of the Mixon and Vanderslice patents fails to disclose these limitations, the Applicants respectfully submit that these independent claims, and dependent claims 2-9, 11-12, and 14-20, which depend therefrom include all limitations thereof, are patentable and nonobvious over the cited references.

While the Mixon patent does disclose a sensor for determining a key-off condition of the vehicle, the Mixon patent fails to combine such a sensor with logic for enabling energy flow from a battery to a heater to heat the battery in response thereto. To make up for this deficiency, the Examiner relies upon the Vanderslice patent to teach that it would be obvious to trigger heating the battery as a function of determining the key-off condition (i.e., shut-down condition). The Applicants respectfully submit that it is nonobvious to modify the Mixon patent in this manner based on the teachings of the Vanderslice patent because the Vanderslice patent merely relates to triggering battery heating as a function of battery temperatures, and without regard to whether a vehicle is in a shut-down condition.

For the foregoing reasons, Applicants respectfully submit that the aforementioned claims are patentable and nonobvious over the improper combination of the Mixon and Vanderslice patents.

Rejection of Claims 5 and 14-17 Under 35 U.S.C. § 103(a) Over the Mixon, Vanderslice, and Gollomp Patents

The Applicants respectfully submit that dependent claims 5 and 14-17, which depend from patentable independent claims 1 and 13, are patentable at least for the same reasons that the independent claims from which they depend are patentable.

Conclusion

In view of the foregoing, the Applicants respectfully submit that each rejection has been fully replied to and traversed and that the case is in condition to pass to allowance. The Examiner is respectfully requested to pass this case to allowance and is invited to contact the undersigned if it would further prosecution of this case to allowance.

Respectfully submitted,

Douglas Zhu

By _____

John R. Buser
Reg. No. 51,517
Attorney/Agent for Applicant

Date: 4-26-05

BROOKS KUSHMAN P.C.
1000 Town Center, 22nd Floor
Southfield, MI 48075-1238
Phone: 248-358-4400
Fax: 248-358-3351